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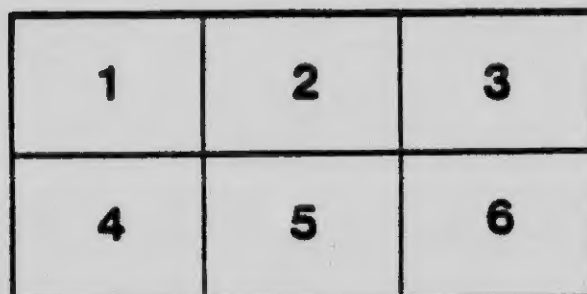
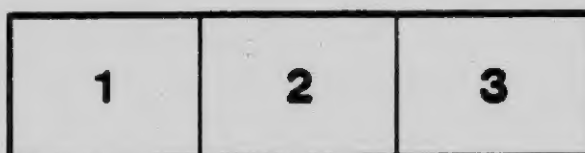
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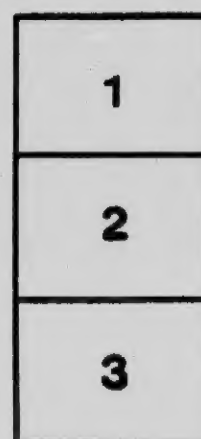
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ECONOMICS

LESSON 7



By

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SHAW CORRESPONDENCE SCHOOL
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ECONOMICS

LESSON VII.

Exchange

THE problems connected with exchange—i.e., the voluntary giving of one commodity or service on condition of receiving another—are among the most important with which we shall have to deal. They will form the subject of the next four lessons, VII., VIII., IX. and X.: the present lesson deals with the general problems of exchange; the eighth with money, the medium of exchange; the ninth with credit exchange—banking; the tenth with the laws of international exchange or international trade.

The importance of exchange as a division of economics may be realized in a moment by supposing all exchange of commodities at an end. In such a case, each individual would have to produce for himself everything that he needed, with the result that we should all find ourselves living like savages, since none of us could produce for himself more than would satisfy the most elementary cravings of his physical life—food, clothing and shelter. Even these needs would be only miserably satisfied, while all the higher needs of mankind would go entirely unappeased. So in his economic life, as elsewhere, man is, as Aristotle says, a social, a gregarious animal. He who lives to himself alone is *ἢ Θηρίον ἢ Θεός*—either a beast or a god—less or more than human.

Rate of Exchange of Commodities.

The exchange of commodities is, then, a primary necessity of civilized life. The next important point is that of the exchange value or the *rate* of exchange—the amount of any one commodity which it is necessary to exchange in the market for a given amount of another, and the laws by which that amount is regulated by supply and demand (see Lesson I.) under various conditions of life. (Here the student may either exclude money from consideration alto-

gether, or he may, as he is perfectly justified in doing, treat it as a single commodity—gold, since our dollar is simply 23.22 grains of pure gold.)

This great problem of the rate of exchange of commodities against each other, or against money, has become enormously complicated under modern conditions of living, where the prices of at least the staple commodities are decided in a world-wide market. The student will find it far easier to grasp the main points if he allows himself to be mentally transported to some small market* such as was furnished by the mediaeval town and its surrounding district, or such as might still be furnished by some remote, self-sufficing community of to-day. He should also refer to the latter part of Lesson I., a knowledge of which is taken for granted.

Competition in a Small Market.

Suppose, then, that in some such isolated place where communication with the outside world is exceedingly difficult, and there is practically no need to consider importation, four persons—A, B, C, D—are the sole producers of a given commodity—hats, for example. Under such conditions each of the competing hatters would be trying all the time to allure customers to himself from the others. He would do so by attempting to give them more for the same money or the same thing for less money than his competitors, or at least to make them believe he was doing so.

How would this be possible? For one thing, he might work harder and thus turn out a greater product per annum than his competitors, and thus his labor cost per unit of product would be less. Secondly, he might keep his living expenses down below theirs, and thus be able to subsist on a small margin of profit. Thirdly, he might use some labor-saving machinery not used by his competi-

*A market, in the economic use of the word, does not mean any particular place where buyers and sellers haggle over the prices of commodities; it means the process of higgling between all the buyers and sellers of a commodity, as a result of which a normal market price for the time being is finally reached.

tors, and thus turn out more hats in a shorter time. Fourthly, by shrewdness of bargaining, or by being able to pay cash, he might buy his raw material for less than the others.

Marginal Producer and Producer's Surplus. Normal Price.

In all or any of these ways, then, it would be possible for the keenest of the four competitors to undersell or seem to undersell his rivals. Suppose that A, the most efficient of the four hatters in the community we are considering, is able to make a living by selling his hats for \$1.50; B, by reason of lack of capital or machinery, or perhaps of personal skill or industry, finds he cannot make ends meet if he sells for less than \$1.60; C, a still less efficient producer, cannot afford to sell his hats for less than \$1.70. These three, however, cannot, even when working at their utmost speed, manufacture as many hats as the consumers of the community require and are willing to purchase at a price remunerative to the producer. The supply is not equal to the demand. So we have a fourth producer, D, called into activity, who, on account of still greater inefficiency, cannot make a living wage unless he is able to dispose of his hats at \$1.80. The community's demand is just sufficient to purchase his product at \$1.80, and thus at last we find supply and demand in equilibrium.

There is probably in the community some other person, E, who could produce hats for \$2.00, but as a sufficient supply can be obtained at \$1.80, the community will not pay more than that. Thus \$1.80 is the *normal market price*—the price at which with the present demand a sufficient supply can be obtained. But the others are not going to sell their hats for less than the price D is able to get—*there is only one market-price for the same commodity in the same market at the same time*. D is what we call the *marginal producer*—i.e., the one who produces so inefficiently that he can just make a living at the market price. A, B and C meanwhile, who are able to make a living when

selling their hats at \$1.50, \$1.60 and \$1.70, are now, at the market price of \$1.80, making an extra profit of 30, 20 and 10 cents respectively on each hat sold. This profit is often called *producer's surplus*, inasmuch as it represents the advantage of each of the other producers per unit of product over that producer who can just keep in business at the normal market price.

Normal Price.

The normal price under the conditions which we have depicted is, then, \$1.80, because at that point the demand for hats is just equal to the supply, or, as the economist puts it, supply and demand are in equilibrium. Suppose now that a considerable influx of immigrants occurred, and that among these immigrants there were no hatters. The result would be that the demand for hats would be increased while the supply would remain stationary; those who were not ready to pay \$2.00 for a hat might not be able to procure one. If the new normal market price were \$2.00, E would be able to begin manufacturing hats. Again, new hatters might come into the community who could produce an abundance of hats. The competition of the newcomers would naturally drive prices down, and this lowering of prices would stimulate the demand for hats, as under the law of diminishing utility* a consumer might consider a hat worth \$1.50 to him which he would not buy at \$1.80. It might be possible to dispose of all the product by a drop of prices to \$1.50, which would become the new normal market price. To put this briefly, the normal market price is that at which supply of and demand for commodities are equal; where demand is increased while supply remains constant, that demand is checked by an increase in the normal market price; where supply is increased and demand remains constant, that demand is stimulated by a drop in the normal market price.

So far all our argument presumes the existence of free competition between buyers and sellers. The buyers are

*See Lesson I.

at liberty to buy as cheap as they can, and the sellers to sell as dear as they can. And while \$1.80 is our normal market price, that does not necessarily mean that every transaction is closed at that price. A keen buyer may easily get his hat for 5 or 10 cents less. A keen seller may easily secure 5 or 10 cents more by taking advantage of his ability in bargaining, just as on the stock exchange slightly different prices are often paid for the same stock at almost the same moment. The actual price, however, approximates closely to the normal price.

Advantages of Free Competition.

Free competition means on the whole an economic gain and was considered by the older economists an exceedingly beneficial state of affairs. Their view was that under free competition the price of everything would be forced down to the minimum, and that all producers would always be desirous of producing as efficient and cheaply as possible in order to undersell their competitors and to let the consumer have his goods at the lowest possible price. "Competition," they said, "is the life of trade." It kept everybody hustling to adopt the latest labor-saving method of production. Thus the consumer derived the ultimate benefit. From the consumer's point of view—and economists are in the narrower sense of the word consumers rather than producers—nothing could be more admirable than the process of keeping the producers of commodities on the jump to supply all their wants at the lowest possible price.

Disadvantages of Free Competition.

Unfortunately, competition has not all the virtues claimed for it by its enthusiastic advocates. Even perfectly legitimate means of gaining advantages over one's rivals may be pushed to excess. Greater speed in production may and often does lead to carelessness in workmanship—the article being got up to sell, and the seller quite oblivious of the fact that such an article might last only half as long as the better product of other makers. Secondly, one manu-

facturer may use poorer material than his competitors and thus produce an article which looks "just as good" as theirs, but is not. He may use cheap "shoddy" to make a hat just as others use it to make clothes. In a word, he may adulterate his product.

Adulteration, as our analysts tell us, is exceedingly common, occurring in manifold forms, such as the using of chicory in coffee, of shoddy in the manufacture of clothes, etc. It may result in gain to the adulterator, but it certainly does not result in gain to the general public, and may, therefore, be described as illegitimate competition from the public's point of view. Some economists have, however, defended it, and John Bright protested against an anti-adulteration law on the ground that it interfered with freedom of competition, saying that the purchasers of such commodities should be forced to look out for themselves.

Another means of getting trade away from one's neighbor is by advertising in various ways. No doubt a certain amount of this is necessary to put the merits of one's goods before the public, but only too often that advertising, as is often the case with patent medicines, unloads worthless goods upon the public. The advertising bill is probably the largest that most patent medicine manufacturers have to pay. But for all advertising, whether of meritorious goods or of trash, the public has to pay the cost in the long run. It is a charge upon all industry, and some part of our present high prices is no doubt due to the increase of advertising.

Decline of Competition.

One of the leading phenomena of modern economic life is the decline of free competition in many important industries in which either one great organization—a trust—has secured control of the industry, or a number of producers—a pool—have come to some agreement which limits their competition in various ways, as by refusing to sell below a certain fixed price. To show how such a state of things arises, we will revert to our former illustration.

How Competition Declines.

One of the hatters, who by hard work and forethought, we will say, has got ahead of the others, finds himself able to save money. He has got his advantage in one or more of the ways which we have described, and by giving better values to his customers has so increased his sale of goods that his aggregate profit is more than before. He finds himself, then, in a fairly comfortable position; his income is considerably higher than his expenditure, and he thus has money to invest. If, as his previous record indicates, he is an ambitious person, he will turn his savings into his business, in order to make his plant more efficient, and to secure the advantages detailed in the last lesson as proceeding from large scale production. Then, producing on a larger scale than his competitors, he will be able to manufacture much more cheaply than they, and will be able to sell his goods at a price at which they are unable to compete. In this way, then, he may gradually get control of the hat trade of the community. The weakest hat maker, who has least technical and business skill, may find it impossible to make a living in the business at all—possibly he may become an employee of his more successful rival. The other two, we will say, survive with difficulty, just managing to exist on the new lower prices which have been set for the community by the large scale producer.

Time goes on. The first manufacturer becomes keener and keener for enlarged profits, but, strong as he is, he does not venture to raise prices and drive people to trade with his still struggling competitors. Others also might find it profitable to enter the industry if he were to put up the prices. So things go on for a time, until finally the happy thought strikes him: "Why not buy out the others? They will sell out cheaply because they are making so little money. Then I shall be in sole control of the market and may put prices where I please." So he tries this scheme, if he has the ready cash to put it through. If he has not, then he may amalgamate the three industries into a company, of which the other two perhaps receive cumulative

preferred 7% stock for their property, while the large manufacturer has the controlling voice on account of his ownership of a majority of the stock.

Monopoly.

Now, then, we have a monopoly established in our community, so far as the manufacture of hats goes, at least. What is our manufacturer going to do now? and where is he going to fix the prices, since he has the only factories equipped for hat-making, and it is, by hypothesis, impossible to import them from outside? He has complete control of the supply.

Limitations of Monopoly.

Our manufacturer is anxious to make as much as he can, but he cannot drive the price too high or else the common people will give up wearing hats altogether. These may become a mark of wealth and distinction, like automobiles. But such a course would not pay him, because in every community the comparatively poor are far more numerous, and in the aggregate buy far more largely of such articles as hats than do the wealthy. It is not our manufacturer's object to make the most possible on each individual hat, but to make the greatest aggregate profit on his whole product. He might be supposed to know already just about how many hats the community will take at each price, but if he does not he will have to experiment by raising and lowering the prices and calculate what price gives him the greatest aggregate profit. His calculation might run about as follows:

At \$10.00 I can sell 3,000 hats costing \$1.60 each;	
net profit on each hat \$8.40; or.....	\$25,200
At \$5.00 I can sell 10,000 hats costing \$1.50 each;	
net profit on each hat \$3.50; or.....	35,000
At \$4.00 I can sell 20,000 hats costing \$1.40 each;	
net profit on each hat \$2.60; or.....	52,000
At \$3.00 I can sell 32,000 hats costing \$1.30 each;	
net profit on each hat \$1.70; or.....	\$54,400

At \$2.00 I can sell 50,000 hats costing \$1.20 each;
net profit on each hat 80c.; or.....\$40,000

Fixation of Monopoly Price.

Our manufacturer, then, experiments with the above results, and after thoroughly testing what he can sell at the various prices places the price at \$3.00 and keeps it at that until \$3.00 becomes recognized in that community as the customary price for a hat.

From this we may derive the general conclusion that when an individual or a group of men acting together are in control of the supply of an article, the price at which they will sell it will be that at which the total aggregate profit to themselves will be greatest. They will not put the price extremely high, because then ordinary people will try to find some substitute, if the article is not absolutely indispensable to life; the demand at the high price will be slight, the sale will be small, and, although the profits on each article sold will be large, yet they will not total as much as if a lower price had been set and a greater number of articles sold. In order to sell on a very large scale, the monopolists must, as a rule, be content with a fairly moderate price per unit of product. They cannot usually force goods on a consumer who does not find it worth his while to buy them. His demand and the price which he is willing to pay is governed by the utility of the article to him, and, as we have seen in Lesson I., this utility is a diminishing utility—it decreases with every increase in the amount of the article which he already has.

The manufacturer seems now to be in a very enviable position, raking in large profits from the sale of the articles which he controls. But to some extent at least he is a colossus with feet of clay. Selling hats at \$3.00 which cost him only \$1.30 to produce, he is never sure that some new man may not commence manufacturing the goods and cut into his very profitable trade. There is no law against it. The

*The decline in cost of production here shown is owing to the saving due to large scale production.

new man is just as much entitled to carry on the hat-making industry as the monopolist.

How the New Competition is Crushed.

Suppose such a case occurs. A bright young man of small capital, but considerable technical skill and business ability, begins to manufacture hats, selling them at \$2.50. The monopolist cuts his price to \$2.25, his rival to \$2.00. The monopolist makes a further reduction to \$1.75, and his rival then offers his hats at \$1.50. This we will suppose is rock-bottom price for him, as he manufactures only on a small scale. The monopolist can, however, go on down to his manufacturing price of \$1.30 or so. If the rival has only small capital he is apt to be ruined; if he has large capital and can stand for a considerable time the strain of manufacturing without a profit, then the monopolist will get tired of the game and the result will in all probability be some sort of arrangement between the two as to prices and quantities to be sold at those prices. Or perhaps the younger man may be taken into the monopoly, receiving stock for his interest in his factory.

Thus the monopoly or single control of the industry would be restored, and the consumer would again have to pay the monopoly price for the commodity. But it should be remembered that still another rival may arise at any moment and, if reasonably well provided with capital, may make considerable trouble for the monopolist, though in the end he is likely to be ruined or forced to sell out to the monopoly.

Greater Power of the Large Monopoly.

This is still more likely to occur when a monopoly holds the trade of a hundred communities and some local competitor begins business in one of them. Then the monopoly can easily afford to sell at a loss in that community (perhaps recouping itself by higher prices in the others), crush its competitor, and then raise its prices again to their normal level. Of course, if the new rival has capital sufficient

to enable him to compete in all or most of the markets of the older company at once, it will be impossible to dispose of him so easily. In such a case the result will probably be the amalgamation of the two concerns, or at least a working agreement between them not to sell at less than a certain fixed price. This would in practice have the effect of perpetuating the monopoly.

Monopoly Price Not Necessarily Higher Than Competitive.

Our analysis probably fairly covers the situation with regard to such a commodity as hats under competitive and under monopolistic conditions. But the student must remember one thing—there is no absolute necessity that a monopoly price for a certain article will be above the competitive price for the same article in the same market. In the case of competition, as we have seen, the price must be sufficient to equal the cost of production of the least efficient producer whose product is needed by the community in question. The monopoly, however, is, because of the great advantage of large scale production, the most efficient producer rather than the least, and it may pay the monopoly to fix its price at a figure which makes its profit per article less than the producer's surplus of the most efficient over the least efficient producer. By doing so it may make the largest possible aggregate profit, because of the enormous demand induced by the low price of the article which it controls. Some people claim that Standard Oil is in this position—that its prices are less than those which would be necessary if the old wasteful competitive system prevailed. This is very much a matter of opinion. What is certain is that the price of oil is lower than it was under the old competitive system—lower because of the great improvement in the production and transportation of oil. But we cannot be sure that if competition were restored to-day under these improved conditions, the price of oil would not be lower than it is. It is probably rarely the case that monopoly price is less than competitive.

Distinction Between Competitive and Monopoly Price.

So far we have dealt in the main with a small isolated community, and we have found that the price of a commodity, when free competition prevails, is likely to be equal to the cost of production of that commodity when manufactured by the least efficient producer actually employed; other producers have a lesser cost of production per unit simply because they are more skilful or have larger and better equipment, and these favored persons selling the same article for the same price—because one article cannot have two prices in the same market at the same time—secure a producer's surplus—the difference between their lower cost of production and the higher cost of production of the least efficient producer.

Under monopoly, on the other hand, the price tends to be that which gives the monopolist the greatest aggregate profit. In a small community, as we have seen, he will be able to experiment and find out approximately what that price will be.

Difficulty of Predicting Supply and Demand.

In practice, the fact that for most commodities to-day our market is a world-market greatly complicates our problem. It is not merely the hat-makers of a single community who are in competition—it is the hat-makers of the whole world. And who is going to tell the hat-makers of Toronto or Montreal how many hats will be manufactured or are going to be needed at a given price throughout the world in a given space of time—say a year? In the modern world our competing hat-makers go on producing blindly, with only the roughest general ideas as to the state of the market. And none of them can tell, unless he has a contract signed for the purchase of his product, what he will get for that product in the market. It is clearly impossible for one small competitor in one corner of the world to gauge what the world's demand in a given time is likely to be. And while he may be able to save up his hats if there is no imme-

diate demand for them, yet the fact that the next year they would be out of fashion would make it impossible for him to sell them for what they had cost him. Fashion is a disturbing factor with which the makers of clothes have to reckon.

The producer of an absolutely staple commodity—a commodity that is always usable, like wheat, or still more, gold—is in a somewhat better position. If his product is not purchased at a fair price one year, he can keep it until the next—in the case of wheat, with considerable cost for storage and loss through shrinkage of the grain; in the case of gold, with practically no expense except that for safekeeping. In the case of our food products, the quantity of which is largely dependent upon nature, a good year is thus used to balance up a poor one, with the result that prices in the good year are a little higher than they would otherwise be, while in a bad year they are lower than they would be if only the crop of that year were available for consumption.

The same thing happens in regard to fruits. With equal crops and equal demand, prices are higher at the height of the season and lower out of season than before the invention of cold storage. At the height of the season, when fruit is exceedingly plentiful and is sold, as the saying runs, for a song, the cold storage people take a considerable portion of it out of the market, thus lessening the supply and increasing the price. On the other hand, fruit is now cheaper out of season, because the cold storage companies are letting it out of storage at a moderate rate compared with what was charged when it had to be imported from some distant land.

These considerations greatly modify the rigidity of our conclusions. What producer or what consumer is able at any moment to say with knowledge of the supply of or the demand for a given commodity at various prices, just what the normal price of that commodity will be? On the whole, all one can say is that the local market price tends to be the same as the normal price at the chief centre of distribution, less the cost of transportation. Thus the price of wheat in

the United States and Canada long tended to be equal to that in Liverpool, less cost of transportation. This was the case so long as both the United States and Canada exported large quantities of wheat to Liverpool, but is scarcely so now, as the United States consume nearly all their product. On the whole, one may say that a great staple commodity such as wheat tends to conform more strictly to the normal price in a competitive market than other commodities, because wheat is so important to the race that information about the condition of the wheat crops of different countries is very widely diffused. The demand for it is also fairly constant, or rather increases approximately in proportion with the growth of population of the wheat-eating countries. Wheat is not likely, in our time at least, to go out of fashion.

Concentration of Trade.

As the trade of the world in its great staple commodities is passing into fewer and fewer hands and centering in a few great communities such as London, Paris, New York and Chicago, we may expect to find demand and supply more accurately calculated by those who are at the centre of affairs. These men will be all the time receiving messages as to the state of supply and as to the conditions influencing demand in various parts of the world, and they will more and more "make" the market price on the basis of a consideration of supply and demand. They may do even more. They may, like Standard Oil, embrace the whole world with their organization, and may be able to dictate to the world a market price higher than the normal competitive price—a monopoly price which will bring them the greatest possible aggregate profit.

On this subject students are strongly advised to read Frank Norris' novel, *The Pit*, which may be obtained at most public libraries. It is published by Nelson and may be secured (from Toronto booksellers at least) at the very moderate price of fifteen cents, plus postage.

EXAMINATION QUESTIONS

ECONOMICS.

LESSON 7.

1. Mention ways in which a merchant may attract customers from his competitors. Which of these bring gain to the public? Which do not?
2. Explain clearly what is meant by normal market price? Marginal producer? Producer's surplus?
3. Why does demand increase when prices fall?
4. Illustrate from your own experience the economic advantages of free competition.
5. Show clearly how out of a state of free competition combination and monopoly may arise.
6. How is it possible for a monopoly to maintain itself in an industry which anyone is free to enter?
7. Explain the way in which the holder of a monopoly regulates his prices.
8. Suppose a monopolist knows in advance the demand for his commodity at different prices and its cost of production when produced in those quantities, where would he fix the price in the following:

Demand.	Cost.	Profit?
10 at \$1,000	10 at \$500	
20 " 800	20 " 460	
30 " 700	30 " 450	
40 " 600	40 " 430	
60 " 500	60 " 425	
80 " 450	80 " 420	
100 " 400	100 " 415	

9. What makes it impossible for the man who opens up a small local oil well to compete with Standard Oil for the trade of his locality?
10. Is monopoly price always higher than competitive? Discuss fully.
11. What determines the price which our farmers get for their wheat?

